

We claim:

1. An optical disc player for playing an optical disc having a first side and a second side, wherein data is arranged on a data layer of said first side along a first spiral oriented in a first direction and data is arranged on a data layer of said second side along a second spiral oriented in a direction opposite to that of said first spiral when viewed on the respective sides, said player comprising:

a laser head reading data from the optical disc;

a laser head controller controlling the movement of said laser head;

a yoke selectively moving the laser head from one side of the optical disc to the other in response to commands from the laser head controller;

a motor rotating the optical disc in the same direction independently of whether the laser head is on one side of the optical disc or the other; and

a data buffer buffering data received from the laser head.

2. The disc player of claim 1 wherein the optical disc has a periphery and a hub, and said laser head controller controls said laser head to move between a point disposed closer to said periphery and another point closer to said hub.

3. The disc player of claim 2 wherein at least one side has at least two data layers.

4. The disc player of claim 3 wherein the disc includes a lead-in area, a lead-out area, and said laser head controller initially directs said laser head to said lead-

in area.

5. The disc player of claim 1 further comprising a sensor that senses the required rotation for reading the optical disc and a motor controller that controls the operation of said motor, said motor controller setting the direction of rotation of the motor in accordance with information from the sensor.

6. The disc player of claim 1 wherein the optical disc has data arranged to be played in sequence starting on said first side and ending on said second side, and wherein the laser head controller cooperates with the yoke to move the laser head in accordance with the sequence in which data is placed on the optical disc.

7. An optical disc player and an optical disc combination, said optical disc having a first side with top and bottom layers, each layer having a respective track along a first spiral, and a second side with top and bottom layers, each layer having a respective track extending along a second spiral, said first and second spirals being oriented in opposite directions as viewed from the respective sides, said combination comprising:

a laser head reading data from said optical disc;

a yoke selectively moving the laser head from one side of said optical disc to the other;

a laser head controller controlling the movement of said laser head across the surfaces of said optical disc and from one side of said optical disc to the other; and

a motor rotating the optical disc in a direction independent of the position of said laser head.

8. The combination of claim 7 wherein said optical disc has a hub and a periphery, said tracks extend between said hub and said periphery and said laser head controller issues commands to cause said laser head to move along said tracks to read data starting at the periphery on one layer to said hub and then from said hub on the other layer of the same side back to said periphery.

9. The combination of claim 7 wherein data is arranged in a sequence starting on one layer of said first side and ending on another layer of said second side.

10. The combination of claim 9 wherein said sequence starts on the top layer of said first side and ends on the top layer of the second side.

11. The combination of claim 9 wherein said sequence starts on the top layer of said first side and ends on the bottom layer of the second side.

12. The combination of claim 9 wherein said sequence starts on the bottom layer of said first side and ends on the top layer of the second side.

13. The combination of claim 9 wherein said sequence starts on the bottom layer of said first side and ends on the bottom layer of the second side.

14. The disc of claim 9 wherein the first track of the sequence extends from the periphery of the disc toward the hub of the disc and the last track starts from the hub of the disc and extends towards the periphery of the disc.

15. The combination of claim 9 wherein the sequence starts at the periphery of the disc and ends at the periphery of the disc.

16. The combination of claim 9 wherein the sequence starts at the hub of the disc and ends at the hub the disc.

17. The combination of claim 9 wherein on each side the track of the inner layer has a radial direction between said hub of the disc and the periphery of the disc and the track on the outer layer has the opposite radial direction.

18. A method of reading an optical disc having a first side with a track with data extending between the hub and the periphery of the optical disc along a first spiral; and a second side having a track with data extending between the hub and the periphery of the disc along a second spiral, said first and second spirals being oriented in opposite directions as viewed from the respective sides, comprising:

providing a laser head;

moving said laser head across the first side to read data;

switching said laser head to said second side;

moving said laser head across the second side to read data; and
rotating said optical disc in the same direction while the data is read from
said first and said second sides.

19. The method of claim 18 further comprising determining the proper
direction of rotation of the optical disc, and rotating the optical disc in this proper
direction when reading data from both sides.

20. The method of claim 19 further comprising sensing that said optical
disc is available for data reading, determining the proper direction of rotation of said
optical disc and rotating said optical disc in the appropriate direction.

21. The method of claim 18 wherein one of said first and second sides
includes a top and a bottom data layer, further comprising reading data from said layers
with said laser head.